

REMARKS

Claims 1-184 are pending. Claims 1, 52, 107, 131, 153, 166, and 170 are amended to incorporate language from claims 2 and 11. Claims 2, 11, 53, 61, 61, 108, 118, 132, 142, 154, 167, and 171 are canceled as redundant. Claims 6-9, 14, 24-31, 43-45, 47-51, 56-59, 64, 66-69, 76, 77, 80-87, and 102-107, 109-131, 133-141, 143-153, 155-166, 168-170, and 172-184 are withdrawn.

Claims 1-4, 15, 22, 23, 32-42, 46, 52-55, 65, 74, 78, 79, and 88-101 were rejected under 35 U.S.C. § 103(a) as allegedly obvious in view of U.S. Patent 6,123,923 (“the Unger patent”) in view of the Lee article. Claim 1 is amended to incorporate the limitations of claim 11 that is not subject to the rejection. As such, the rejection is moot.

Claims 1-4, 15, 22, 23, 32-42, and 46 were rejected as allegedly obvious over U.S. Patent No. 6,159,445 (“the Klaveness patent”) in view of the Lee article. Claim 1 is amended to incorporate the limitations of claim 11 that is not subject to the rejection. As such, the rejection is moot.

Claims 1-5, 10-13, 15-23, 32-42, 46, 52-55, 60-63, 65, 70-75, 78, 79, and 88-101 were rejected as allegedly obvious over the Klaveness patent and the Unger patent in view of the Lee article and further in view of Lin, *et al.* (Chem. Eur. J., 1995, 1, 645-651) (“the Lin article”). To establish a *prima facie* case of obviousness, there must be some reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007). Moreover, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The reason to make the claimed combination, and a reasonable expectation of success, must be found elsewhere than in Applicants disclosure, such as in the prior art, the nature of the problem to be solved, or in the knowledge/understanding of the person of ordinary skill in the art. MPEP § 2143; *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Furthermore, according to MPEP § 2141.02, “[i]n determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious.” Applicants submit that the instant rejection does not meet these requirements.

Amended claim 1 is directed to a polymersome comprising two elements (1) a membrane comprising amphiphilic copolymer comprising amphiphilic block copolymers that comprise at least one hydrophilic polymer bonded to at least one hydrophobic polymer and (2) emissive agents that emit light in the 700-1100 nm spectral regime and where said emissive agent is an emissive conjugated compound comprising at least two covalently bound moieties; whereby upon exposing said compound to an energy source for a time and under conditions effective to cause said compound to emit light that at a wavelength between 700-1100 nm, said compound exhibits an integral emission oscillator strength that is greater than the emission oscillator strength manifest by either one of the said moieties individually. While, the Klaveness patent and the Unger patent patents are alleged to teach vesicles for light imaging agents (Office Action at page 4), neither of the two elements of claim 1 is taught or suggested by the Klaveness patent nor the Unger patent. The Klaveness patent fails to disclose or suggest membranes comprising amphiphilic copolymers or direct one skilled in the art to select and use the instantly claimed emissive conjugated compounds. As for the use of porphyrins which are recited in claim 4, the Klaveness patent only mentions porphyrins generally and in passing in a laundry list of dyes for light imaging (columns 5-7) with no motivation to select them over the other possibilities listed. No examples are directed to porphyrins. The Unger patent also fails to disclose or suggest membranes comprising amphiphilic copolymers or direct one skilled in the art to select and use the instantly claimed emissive conjugated compounds. The Unger patent also lists certain porphyrins among the possible agents for light imaging along with numerous other compounds (columns 11-12) but also provides no motivation to select these compounds from the list of possibilities.

Because neither the Klaveness patent nor the Unger patent teaches or suggests the emissive agents or the amphiphilic copolymers of the instant claims, all elements of the invention would have to be imported from other references. Even though the Office seeks to provide the missing information by importing the teachings of two additional references—the Lee article for the amphiphilic copolymer and the Lu article for porphyrin moieties, the extent of the reconstruction necessary to allegedly arrive at any instant claim, however, is too extensive to be consistent with obviousness.

Further, it is well-established law that rejections based on 35 U.S.C. §103 must rest on a factual basis, and these facts must be interpreted without hindsight reconstruction of the

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invention from the prior art. *In re Warner*, 154 USPQ 173, 178 (CCPA 1967). 35 U.S.C. § 103 requires a specific suggestion or motivation suggested in the prior art to modify the reference or to combine reference teachings. MPEP § 2143. Based on the extensive changes to the disclosures of the Klaveness and Unger patents, it seems that the instant invention can only be derived at through the use of impermissible hindsight. For each of the foregoing reasons, the rejection should be withdrawn.

Upon allowance of the non-withdrawn claims, Applicants ask that the full scope of the elected invention be examined. Additionally, upon allowance of the product claims, Applicants request rejoinder of the process claims in accordance with the provisions of MPEP § 821.04. The withdrawn process claims are amended herein to conform to the scope of the pending product claims.

The foregoing is believed to constitute a complete and full response to the Office Action of record. Accordingly, an early and favorable reconsideration of the rejections and an allowance of all of pending claims is earnestly solicited. Should the Examiner determine that any further action is necessary to place the Application I condition for allowance, the Examiner is encouraged to contact the undersigned by telephone.

Respectfully submitted,

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